

Somatic Cell and Molecular Genetics

Volume 20, Number 1

January 1994

CONTENTS

- Radiation Hybrids for the Proximal Long Arm of the X Chromosome and Their Use in the Derivation of an Ordered Set of Cosmid Markers from a Defined Subregion in Proximal Xq13.1 1
Dan Röhme, Thomas Sidén, Silvère M. van der Maarel, Frans P.M. Cremers, Uma Tantravahi, Jean-Christophe Marinoni, Hans-Hilger Ropers, and Charles E. Schwartz
- Spontaneous and Induced Homologous Recombination between *lacZ* Chromosomal Direct Repeats in CV-1 Cells 11
Dale L. Ludwig and James R. Stringer
- Structure and Expression of the Huntington's Disease Gene: Evidence against Simple Inactivation Due to an Expanded CAG Repeat 27
Christine M. Ambrose, Mabel P. Duyao, Glenn Barnes, Gillian P. Bates, Carol S. Lin, Jayalakshmi Srinidhi, Sarah Baxendale, Holger Hummerich, Hans Lehrach, Michael Altherr, John Wasmuth, Alan Buckler, Deanna Church, David Housman, Mary Berks, Gos Micklem, Richard Durbin, Alan Dodge, Andrew Read, James Gusella, and Marcy E. MacDonald
- Detection of Deletion Mutations Extending Beyond the HPRT Gene by Multiplex PCR Analysis 39
James C. Fuscoe, Anita Jeffers Nelsen, and Giuseppe Pilia
- The Receptor-Recycling and Lysosome Biogenesis Mutant TFT1.11 Belongs to a New Complementation Group, End6 47
Mirella Bucci, Thomas W. Moyer, Clark M. Brown, Russell B. Wilson, and Robert F. Murphy
- Generation of a Mouse Model for Citrullinemia by Targeted Disruption of the Argininosuccinate Synthetase Gene 55
Gerald Patejunas, Allan Bradley, Arthur L. Beaudet, and William E. O'Brien

BRIEF COMMUNICATIONS

- Inclusion of Synthetic DNA Templates of Similar Length and Base Composition to PCR-Amplified Products in Restriction Enzyme Digestions: An Efficient Aid in Characterization of Point Mutations 61
Deborah Klein, David E. Tabor, Rebecca Z. Sokol, and Stephen D. Cederbaum
- Assignment of the Human Lens Fiber Cell MP19 Gene (LIM2) to Chromosome 19q13.4, and Adjacent to ETFB 67
Kimberely Lieuallen, Mari Christensen, Brigitte Brandriff, Robert Church, JianHua Wang, and Gregory Lennon
- Localization of Acyl Coenzyme A: Cholesterol Acyltransferase Gene to Human Chromosome 1q25 71
Catherine C.Y. Chang, Walter W. Noll, Nancy Nutile-McMenemy, Elizabeth A. Lindsay, Antonio Baldini, Walter Chang, and Ta Yuan Chang
-

Somatic Cell and Molecular Genetics

Volume 20, Number 2

March 1994

CONTENTS

Chromosome Localizations of Genes for Five cAMP-Specific Phosphodiesterases in Man and Mouse	75
<i>Athena Milatovich, Graeme Bolger, Tamar Michaeli, and Uta Francke</i>	
Mouse Huntington's Disease Gene Homolog (<i>Hdh</i>)	87
<i>Glenn T. Barnes, Mabel P. Duyao, Christine M. Ambrose, Sandra McNeil, Francesca Persichetti, Jayalakshmi Srinidhi, James F. Gusella, and Marcy E. MacDonald</i>	
Isolation, Characterization, and Mapping of Gene Encoding Dihydrolipoyl Succinyltransferase (E2k) of Human α -Ketoglutarate Dehydrogenase Complex	99
<i>Ghazala Ali, Wilma Wasco, Xingang Cai, Paul Szabo, Kwan-Fu R. Sheu, Arthur J. L. Cooper, Sandra M. Gaston, James F. Gusella, Rudolph E. Tanzi, and John P. Blass</i>	
High-Frequency Loss of Specific Immunoglobulin Production in Hybridoma Cell Lines Bearing a Chromosomal Immunoglobulin κ Gene Modified by Homologous Recombination	107
<i>Philip Ng and Mark D. Baker</i>	
Physical Map of Small Cell Lung Cancer Deletion Region on Short Arm of Human Chromosome 3 (3p13-22) Based on Radiation Fusion Hybrid Analysis	121
<i>Thomas S. Siden, William Golembieski, Johan Kumlien, Dan Röhme, and David I. Smith</i>	
BRIEF COMMUNICATIONS	
Region-Specific Microdissection Library and Single-Copy Microclones for Human Chromosome 2p11-p13	133
<i>Jingwei Yu, Jianxin Qi, and Fa-Ten Kao</i>	
Identification of Human Chromosome Region 3p14.2-21.3-Specific YAC Clones Using Alu-PCR Products from a Radiation Hybrid	137
<i>Thomas S. Siden, Johan Kumlien, Timothy Drumheller, Scott E. Smith, Dan Röhme, Hans Lehrach, and David I. Smith</i>	
Alignment of Physical and Genetic Maps of Human 8q23-qter Using Somatic Cell Hybrid Mapping Panel	143
<i>Julia E. Parrish, Yang Wang, Michael J. Wagner, and Dan E. Wells</i>	

Somatic Cell and Molecular Genetics

Volume 20, Number 3

May 1994

CONTENTS

- Electron Microscopic Analysis of In Vitro Replication Products of *ors 8*, a Mammalian Origin Enriched Sequence 147
Christopher E. Pearson, Awatef Shihab-El-Deen, Gerald B. Price, and Maria Zannis-Hadjopoulos
- Membrane-Bound Neomycin Phosphotransferase Confers Drug-Resistance in Mammalian Cells: A Marker for High-Efficiency Targeting of Genes Encoding Secreted and Cell-Surface Proteins 153
William A. Mohler and Helen M. Blau
- Chromosomal Localization and Sequence Analysis of a Human Episomal Sequence with In Vitro Differentiating Activity 163
C. Boccaccio, F. Apiou, J. Deschatrette, A. Aurias, and M. Meunier-Rotival
- Xist* is Expressed in Female Embryonal Carcinoma Cells with Two Active X Chromosomes 171
H. H. Tai, J. Gordon, and M. W. McBurney
- Somatic Cell Genetic and Biochemical Characterization of Cell Lines Resulting from Human Genomic DNA Transfections of Chinese Hamster Ovary Cell Mutants Defective in Sterol-dependent Activation of Sterol Synthesis and LDL Receptor Expression 183
Mazahir T. Hasan, Catherine C. Y. Chang, and T. Y. Chang
- Tissue-Specific Extinguisher Loci in the Murine Genome: A Screening Study Based on a Rat/Mouse Microcell Hybrid Panel 195
Alan J. Schafer, Gary A. Bulla, and R. E. K. Fournier
- Tissue-Specific Extinguisher Loci in the Human Genome: A Screening Study Based on Random Marking and Transfer of Human Chromosomes 215
Michael H. Shapero, Amelia A. Langston, and R. E. K. Fournier
- Removal of Cyclobutane Pyrimidine Dimers from a UV-Irradiated Shuttle Vector Introduced into Human Cells 233
Ann K. Ganesan and Philip C. Hanawalt

BRIEF COMMUNICATIONS

- Chromosomal Assignments of Mouse Genes for Connexin 50 and Connexin 33 by Somatic Cell Hybridization 243
Hans-Jürgen Schwarz, Young Sook Chang, Peter A. Lalley, and Klaus Willecke
- Erratum: The Use of Methylthioadenosine Phosphorylase Activity to Select for Human Chromosome 9 in Interspecies and Intraspecies Hybrid Cells 249
Bruce W. Porterfield, Helen Pomykala, Emin Maltepe, Janet D. Rowley, and Manuel O. Diaz
- Erratum: Hepatic Gene Therapy: Efficient Retroviral Mediated Gene Transfer into Rat Hepatocytes In Vivo 251
Tadeusz M. Kolodka, Milton Finegold, Mark A. Kay, and Savio L. C. Woo

ANNOUNCEMENT

- The National Institute of General Medical Sciences' Human/Rodent Somatic Cell Hybrid Mapping Panels 253

Somatic Cell and Molecular Genetics

Volume 20, Number 4

July 1994

CONTENTS

- Isolation of Two Contigs of Overlapping Cosmids Derived from Human Chromosomal Band 3p21.1 and Identification of 5 New 3p21.1 Genes 255
Viji Shridhar, William Golembieski, Asha Kamat, Scott E. Smith, Nicole Phillips, O. J. Miller, York Miller, and David I. Smith
- Drug-Specific Rearrangements of Chromosome 12 in Hydroxyurea-Resistant Mouse SEWA Cells: Support for Chromosomal Breakage Model of Gene Amplification 267
Yvonne Wettergren, Annika Kullberg, and Göran Levan
- Molecular Characterization of Multilocus Deletions at a Diploid Locus in CHO Cells: Association with an Intracisternal-A Particle Gene 287
Rosemary E. Davis and Mark Meuth
- Spectrum of Spontaneous Missense Mutations Causing Cyclic AMP-Resistance Phenotypes in Cultured S49 Mouse Lymphoma Cells Differs Markedly from Those of Mutations Induced by Alkylating Mutagens 301
Karen B. Gorman and Robert A. Steinberg
- Functional and Molecular Analysis of Liver Arginase Promoter Sequences from Man and *Macaca fascicularis* 313
Barbara K. Goodman, Deborah Klein, David E. Tabor, Joseph G. Vockley, Stephen D. Cederbaum, and Wayne W. Grody
- Mutation and Expression of the *XPA* Gene in Revertants and Hybrids of a Xeroderma Pigmentosum Cell Line 327
James E. Cleaver, Mindy McDowell, Christopher Jones, Richard Wood, and Deneb Karentz

BRIEF COMMUNICATIONS

- Pseudogene of Dihydrolipoyl Succinyltransferase (E2k) Found by PCR Amplification and Direct Sequencing of Rodent-Human Cell Hybrid DNAs 339
Xingang Cai, Paul Szabo, Ghazala Ali, Rudolph E. Tanzi, and John P. Blass
- Regional Localization of *DPP4* (alias *CD26* and *ADCP2*) to Chromosome 2q24 345
Dalila Darmoul, Margaret Fox, Clare Harvey, Penny Jeggo, James R. Gum, Young S. Kim, and Dallas M. Swallow
- Construction and Characterization of Region-Specific Microdissection Libraries and Single-Copy Microclones for Short Arm of Human Chromosome 2 353
Jingwei Yu, Suhong Tong, Jianxin Qi, and Fa-Ten Kao

ANNOUNCEMENT

- NIGMS Human Genetic Mutant Cell Repository Online Catalog 359
-

Somatic Cell and Molecular Genetics

Volume 20, Number 5

September 1994

CONTENTS

Oxygen-Resistant Multipotent Embryonic Carcinoma Cell Lines Exhibit Antimutator Phenotypes <i>Charles E. Ogburn, Mitchell S. Turker, Terrance J. Kavanagh, Christine M. Disteché, Annette C. Smith, Ken-ichiro Fukuchi, and George M. Martin</i>	361
Identification of Multiple B-Cell Transcriptional Repressor Elements in the S μ -C μ Intron of Mouse IgH Chain Locus <i>Andrei Gartel</i>	371
Adenylosuccinate Synthetase: A Dominant Amplifiable Genetic Marker in Mammalian Cells <i>Surjit K. Datta, Oivin M. Guicherit, and Rodney E. Kellems</i>	381
Analysis of Tumor Suppressor Gene on Human Chromosome 9 in Mouse \times Human Somatic Cell Hybrids <i>Bruce W. Porterfield, Olufunmilayo I. Olopade, Janet D. Rowley, and Manuel O. Diaz</i>	391
Analysis of Region-Specific Library Constructed by Sequence-Independent Amplification of Microdissected Fragments Surrounding Weaver (wv) Gene on Mouse Chromosome 16 <i>Jianjun Wei, Stephen R. Dlouhy, Jianguo Zhu, Bernardino Ghetti, and M. E. Hodes</i>	401
Spontaneous Mutations at <i>aprt</i> Locus in a Mammalian Cell Line Defective in Mismatch Recognition <i>Patricia Hess, Gabriele Aquilina, Eugenia Dogliotti, and Margherita Bignami</i>	409
Non-P-Glycoprotein-Mediated Multidrug-Resistant Human KB Cells Selected in Medium Containing Adriamycin, Cepharanthine, and Mezerein <i>Tomoyuki Sumizawa, Yutaka Chuman, Hidehiro Sakamoto, Kazuchiyo Iemura, Kurt C. Almquist, Roger G. Deeley, Susan P. C. Cole, and Shin-ichi Akiyama</i>	423
BRIEF COMMUNICATIONS	
On the Role of Lipids in Cell Regulatory Economy <i>Theodore T. Puck</i>	437
Characterization of Chimpanzee-Hamster Hybrids by Chromosome Painting <i>Nicoletta Archidiacono, Rosalia Marzella, Palma Finelli, Rachele Antonacci, Carol Jones, and Mariano Rocchi</i>	439
Cloning and Comparative Mapping of Recently Evolved Human Chromosome 22-Specific Alpha Satellite DNA <i>Mariano Rocchi, Nicoletta Archidiacono, Rachele Antonacci, Palma Finelli, Leonardo D'Aiuto, Roberta Carbone, Elizabeth Lindsay, and Antonio Baldini</i>	443
ANNOUNCEMENT	
Chromosome Segregation and Aneuploidy: An International Meeting	449

Somatic Cell and Molecular Genetics

Volume 20, Number 6

November 1994

CONTENTS

Testis and Somatic <i>Xrcc-1</i> DNA Repair Gene Expression	451
<i>Christi A. Walter, Jianwei Lu, Mukesh Bhakta, Zi-Qiang Zhou, Larry H. Thompson, and John R. McCarrey</i>	
Subclonal Heterogeneity of the Multidrug Resistance Phenotype in a Cell Line Expressing Antisense MDR1 RNA	463
<i>LeRoy A. Hanchett, Raymond M. Baker, and Bruce J. Dolnick</i>	
Somatic Cell Genetic Analysis of Two Classes of CHO Cell Mutants Expressing Opposite Phenotypes in Sterol-Dependent Regulation of Cholesterol Metabolism	481
<i>Mazahir T. Hasan and T. Y. Chang</i>	
Characterization of Spontaneous and Induced Mutations in SV40-Transformed Normal and Ataxia Telangiectasia Cell Lines	493
<i>Christiane Röscheisen, Sabine Haupter, Ulrich Zechner, and Günter Speit</i>	
Minimum Essential Region of CCG1/TAF _{II} 250 Required for Complementing the Temperature-Sensitive Cell Cycle Mutants, tsBN462 and ts13 Cells, of Hamster BHK21 Cells	505
<i>Eishi Noguchi, Takeshi Sekiguchi, Yukiko Nohiro, Toshiro Hayashida, Eiji Hirose, Naoyuki Hayashi, and Takeharu Nishimoto</i>	
Intragenic Regions of the Murine <i>Pgk-1</i> Locus Enhance Integration of Transfected DNAs into Genomes of Embryonal Carcinoma Cells	515
<i>Michael W. McBurney, Susan Fournier, Karen Jardine, and Leslie Sutherland</i>	
Unstable Integration of Transfected DNAs into Embryonal Carcinoma Cells	529
<i>Michael W. McBurney, Susan Fournier, Prabha K. Schmidt-Kastner, Karen Jardine, and Jane Craig</i>	
An Extended Panel of Hamster-Human Hybrids for Chromosome 2q	541
<i>M. Hafezparast, C. G. Cole, G. P. Kaur, R. S. Athwal, and P. A. Jeggo</i>	
ANNOUNCEMENTS	
The New York Academy of Sciences Conference Schedule	549
The Association of Cytogenetic Technologists Twentieth Annual Meeting	553
AUTHOR INDEX TO VOLUME 20	555
SUBJECT INDEX TO VOLUME 20	559
